

EasyData Primer

Data can be collected using Vernier probes with the Vernier LabPro, Texas Instruments CBL 2 or Vernier EasyLink connected to a Texas Instruments calculator (TI 82 – TI 84).

The calculator connects to the input-output port (little round hole) on the LabPro or CBL 2. Make sure that the cord is plugged in all the way or an error may occur. As soon as the LabPro or CBL 2 is powered up it should make some chiming sounds.

The EasyLink plugs into the mini USB port on the top of the TI-84 calculator and accepts a single Vernier analog sensor.

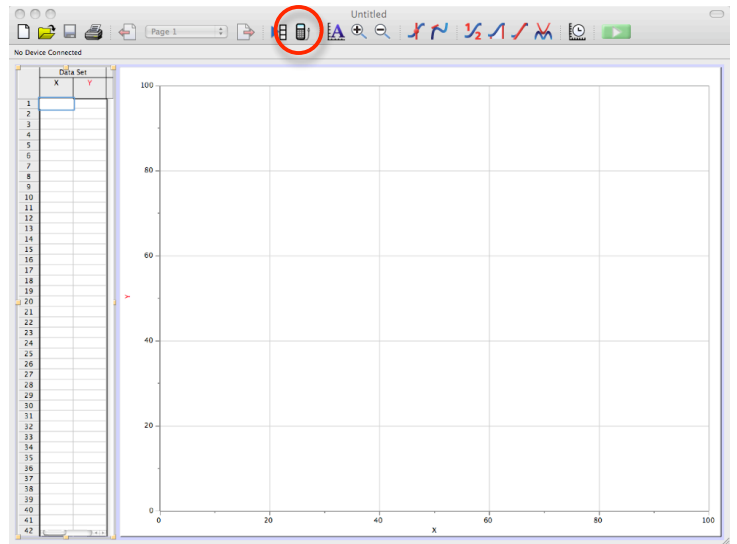
As soon as you turn on the calculator, it should launch the EasyData application and auto ID the sensor connected. If it does not, click on the **APPS** button and scroll down until you find EasyData. Once the application is running, most other capabilities of the calculator are disabled. The data is stored in the lists of the calculator. The independent variable (often time) is typically placed into List 1 and the probe data (dependent variable) is placed into List 2 (although it may be placed in other lists as well).

The main screen will indicate the probe connected as well as the mode of data collection. At the bottom of the screen are “virtual” buttons, which are accessed by the five top buttons of the calculator. Experiment with these buttons (but don’t hit **Start** yet).

Access the **Setup** menu to configure the experiment. **Time Graph** mode will collect data over time. Select this option to set the length of the experiment and data collection rate. There are situations in which you will not want to collect data over time. The **Events with Entry** mode is another popular way to gather data. In this mode, the probe will collect a data point when you tell it to and then you will be prompted for a “value” which will be plotted on the X axis. An example of this would be Boyle’s Law, where the pressure sensor would measure pressure and you would be prompted to enter the volume. When you click **Start**, in the **Events with Entry** mode, a new **Keep** button appears. When you click this **Keep** button, it will collect a sensor reading and then prompt you to **Enter Value**. Enter the value, then click **OK** and proceed to the next data point. Be sure and click the **Stop** button after you have finished collecting all your data points.

When the **Graph** window is active, it will automatically scale the graph to fit the data. Keep this in mind, as it can be confusing. The **Anlyz** button allows you to conduct analysis of the data, such as statistics or curve fits. The **Adv** and **Plots** buttons allow you to view other graphs (if there are any available).

Data from the calculator can be easily imported into Logger Pro or Graphical Analysis for more detailed analysis and printing. Connect the calculator to the computer and launch the application. Click the icon at the top of the Logger Pro or Graphical Analysis window that looks like a TI calculator and follow the directions.



You will need to select the lists to import (typically L1 and L2). Once the data is imported, you can use the capabilities of Logger Pro or Graphical Analysis to customize your graph and print if desired.

